

**Aspire Public Schools - College for
Certain, LLC**

Soil Management Plan

Former Pacific Electric Motors Site
1009 66th Avenue, Oakland, California
(Fuel Leak Case Number RO0000411)

May 16, 2014



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Principal Geologist

Soil Management Plan

Former Pacific Electric Motors
Site, 1009 66th Avenue, Oakland,
California (Fuel Leak Case
Number RO0000411)

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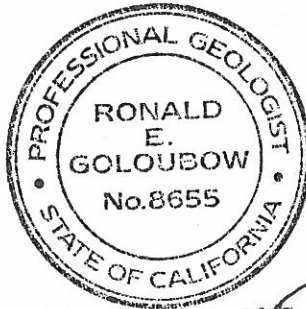
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Certification

All hydrogeologic and geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an ARCADIS U.S., Inc., Professional Geologist.



Expires Nov. 30, 2015

5/16/14
Date

Ron Goloubow, P.G. 8655
Principal Geologist
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1. Introduction

ARCADIS has prepared this Soil Management Plan (SMP) on behalf of Aspire Public Schools (Aspire) and College for Certain, LLC (CFC) for the former Pacific Electric Motors site located at 1009 66th Avenue in Oakland, California (the Site; Figures 1 and 2). The Site has been redeveloped into the Aspire Golden State College Preparatory Academy, which serves grades 6 through 12 and has capacity for 570 students; the school opened in August 2011. The school occupies approximately 1.4 acres and consists of:

- 3 two-story buildings (approximately 41,430 square feet total including 24 full-sized classrooms, 4 labs, 3 girls and 3 boys restrooms, and 4 staff restrooms);
- An asphalt-paved parking area with access via two driveways on 66th Avenue (one for ingress and one for egress);
- An asphalt-paved area for basketball; and
- Several planter areas.

This report is intended to comply with a request from the United States Environmental Protection Agency (USEPA) and Alameda County Environmental Health (ACEH) to prepare an SMP for the Site.

This SMP outlines sampling and health and safety procedures to be implemented during future site modification that could disturb site soil, such as the repair of a subsurface utility at the Site.

This SMP is intended to apply to any subsurface disturbance at the Site. The purpose of this SMP is to communicate the presence of chemicals identified in soil at the Site so that appropriate safety measures can be implemented to protect persons doing invasive site work and to appropriately manage soils at the Site. This SMP provides general protocols for the proper management of soil encountered and/or disturbed during excavation, construction, utility work, site redevelopment, and other work that may encounter impacted soil at the Site.

This SMP is not intended to replace federal, state, or local regulations or regulations addressing worker exposure including Federal and California Occupational Safety and Health Administration (OSHA) training and worker protection rules and regulations,

Code of Federal Regulations (CFR) Title 29, Part 1910.120, or California Code of Regulations (CCR) Title 8, § 5192. It is the responsibility of the Property Owner to ensure that all workers, tenants, contractors, and subcontractors are made aware of the existing conditions, specifically the known presence and magnitude of chemicals so that the appropriate protective measures are implemented.

Issues not addressed in this document include construction and general OSHA worker safety requirements, including the Hazardous Waste Operations and Emergency Response Standard. Contractors who perform the site work are responsible for the health and safety of their own employees and must prepare a health and safety plan that is satisfactory to the owner, Aspire, prior to beginning work at the Site. All work at the Site must be completed in compliance with the federal, state, and local requirements not addressed in this document.

2. Project Overview

The site area is 2.51 acres and is located on the western side of 66th Avenue between East 14th Street (to the north) and San Leandro Street (to the south). The area around the Site is developed with a mixture of commercial, industrial, government, and multi-family residential buildings. The Site is bounded by a residential development to the north, Oakland Fire Department Station Number 2 to the east across 66th Avenue, Fruitvale Business Center to the south, and Northstar International Container Freight and Container Consolidation Services to the west.

The structures formerly associated with Pacific Electric Motors (and infrastructure) have all been demolished. The areas of affected soil have been removed in accordance with the Revised Corrective Action Plan, Proposed Aspire High School Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case No. RO0000411; the CAP) submitted to the ACEH on July 17, 2009 (ARCADIS 2009a). In addition, areas of polychlorinated-biphenyl (PCB)-containing soil were remediated in accordance with the CAP, the Self-Implementing Cleanup Plan (SICP) submitted to the USEPA on October 23, 2009 (ARCADIS 2009b), the response letter from USEPA dated November 13, 2009 (USEPA 2009), and LFR Inc.'s (now ARCADIS) response letters to EPA dated November 18, 2009 (ARCADIS 2009c) and January 14, 2010 (ARCADIS 2010). The configuration of the surface cap presented in Section 3 was presented in a letter to the USEPA by ARCADIS dated April 25, 2011 and the configuration of the cap was approved by USEPA in a letter dated June 16, 2011.

A new school (the Golden State College Preparatory Academy) was developed on the property in 2010 as depicted on Figure 2. As part of the redevelopment of the Site, the ground surface comprised of roadways, sidewalks, parking areas, buildings, and planter areas is serving as a cap to mitigate the potential exposure to the affected soil at the Site.

3. Known or Potentially Chemical-Impacted Soil

Prior to redeveloping the Site, remedial tasks were conducted at the Site to remove soil containing elevated concentrations of lead, arsenic, PCBs, benzene, and total petroleum hydrocarbons as gasoline (see Figures 2, 3, and 4). The removal action for the PCB-containing soil was completed in accordance with the following:

- No. 40 CFR §761.61(a) 40 CFR 761.61 (c) of Toxic Substances Control Act (TSCA) regulations, EPA's conditional approval of the SICP, and EPA's amendments to its approvals.

Although the remedial actions were highly effective in removing the affected soil, the analytical results for 12 confirmation soil samples collected as part of the removal action for the PCB-containing soil indicated that PCBs were present at concentrations greater than the cleanup goal of 0.130 milligrams per kilogram (mg/kg) established for the Site (see the table below and Figure 3 and 4). Due to geotechnical work conducted to strengthen site soils for the redevelopment of the Site, the soil currently in those 12 locations was mixed during the cement treatment of the upper 18 inches of soil across the Site. Thus the PCB-containing soil may be at locations that are not represented by the samples collected in those locations before the geotechnical and grading work. Thus, the PCB concentrations detected in the 12 samples are no longer representative of the PCB concentrations at the Site due to mixing of the soils. The geotechnical work to strengthen the soil included the cement treatment of the upper 18 inches of soil across the Site. This may have resulted in the mixing/cement treatment of the soil at the 12 locations where PCBs were detected at concentrations greater than the cleanup goal.

Sample ID	Depth below TSCA Cap - current ground surface (in feet)	PCBs (in mg/kg)
50' North 1 - SDWALL1'	1.0	0.135
50' North 2 - SDWALL1'	1.3	0.160
50' North 3 - SDWALL1'	1.4	0.250
25' North 7 - SDWALL1'	1.3	0.330
S1-SDWALL 2' R1	1.2	0.230
NE-CORNER 3' R1	2.2	0.270
W1-SDWALL 2'	3.4	0.420
W2-SDWALL 2'	4.0	2.500
SW-Bottom 6' R2	3.9	0.370
PD-1	1.3	0.372
PD-2	1.4	0.940
PD-6	1.2	0.535

Notes: The depth of the samples below the TSCA cap was established by subtracting the sample elevation from the finished floor elevation of the top of the TSCA cap.

To mitigate the human health risk posed by the affected soil, a surface cap was installed over the ground surface of the entire Site. The configuration of the cap summarized below was presented in a letter to the USEPA by ARCADIS dated April 25, 2011 and the configuration of the cap was approved by USEPA in a letter dated June 16, 2011.

- **Trash Enclosure Area**
 - Native soil
 - 18 inches of cement-treated native soil
 - 6 inches of imported aggregate base rock
 - 6 inches of Portland cement concrete (ground surface)
- **Pedestrian Walkway Areas – Concrete**
 - Native soil
 - 18 inches of cement-treated native soil
 - 4 inches of imported aggregate base rock
 - 4 inches of Portland cement concrete (ground surface)

- **Vehicle Traffic Areas**
 - Native soil
 - 18 inches of cement-treated native soil
 - 10 inches of imported aggregate base rock
 - 3 inches of asphalt concrete (ground surface)
- **Parking Areas**
 - Native soil
 - 18 inches of cement-treated native soil
 - 8 inches of imported aggregate base rock
 - 2.5 inches of asphalt concrete (ground surface)
- **Pedestrian Walkway Areas – Asphalt**
 - Native soil
 - 18 inches of cement-treated native soil
 - 4 inches of imported aggregate base rock
 - 2 inches of asphalt concrete (ground surface)
- **Landscaped Areas**
 - Native soil
 - 18 inches of cement-treated native soil
 - 10 inches of native soil
 - 12 inches of imported top soil (ground surface)

4. Cleanup Goals Established for Soil

Risk-based cleanup goals were developed for the Site with an emphasis on health protection by incorporating conservative assumptions in the risk-based calculations. Cleanup goals were calculated by algebraically transforming the standard human health risk assessment equations to solve for a concentration given a target cancer risk of 1×10^{-6} or Hazard Index of 1.

Recommended cleanup goals resulting from this process are presented below:

Total Petroleum Hydrocarbons (TPH)

- TPH as motor oil: 2,500 mg/kg
- TPH as diesel: 180 mg/kg

Metals

- arsenic: 7 mg/kg (site-specific background level)
- cadmium: 7.4 mg/kg
- chromium: 750 mg/kg
- cobalt: 80 mg/kg
- copper: 230 mg/kg
- lead: 80 mg/kg
- zinc: 600 mg/kg

Organic Compounds

- PCBs: 0.130 mg/kg

5. Soil Management During General Construction Activities

The following sections present the contingency protocols to be followed if unknown contamination is encountered during general site maintenance activities.

5.1 Potential Soil Disturbance Activities

Activities that may cause soil disturbance at the Site include: grading, grubbing, utility line repair-replacement, removal/excavation of soil, trenching, and performing other construction activities. If these or other subsurface activities are performed, this SMP will be followed.

5.2 Notifications

Prior to performing invasive activities, Aspire will notify USEPA and the ACEH a minimum of two weeks prior to conducting the proposed activities. A letter describing the scope of the work to be conducted will be provided to describe the nature of the invasive activities. The work will not begin until USEPA and the ACEH have provided approval of the scope of work. At the direction of Aspire, observation of the activities may be provided by ARCADIS. However, the USEPA and ACEH may conduct field oversight of these activities.

5.2.1 Emergency Contacts

The persons indicated in the table below must be notified within 48 hours if subsurface disturbance is anticipated or if unexpected affected soil is encountered. Additionally, if soil is to be transported from the Site to an appropriate landfill, the following contacts must be notified.

Emergency Contacts

Contact	Telephone
Owner – Aspire Public Schools Contact: Tim Simon, Project Manager	510.434.5071 or 831.710.1865
Alameda County Environmental Health Contact: Jerry Wickham	510.567.6791
USEPA Contact Carmen Santos	415.972.3360 office
Environmental Consultant – ARCADIS Contact: Ron Goloubow	510.652.4500 office 510.501.1789 cell
Site Construction Manager Contact: *** to be designated before work begins***	*** to be designated before work begins***

If an emergency situation requiring medical attention, containment assistance, or other emergency assistance arises, workers should call 911 and follow emergency procedures provided in the Contractor's Health and Safety Plan.

5.3 Soil Screening

Prior to conducting intrusive activities at the Site, analytical data for soil samples collected in the area where the work is proposed to take place will be reviewed to assess disposal options. If analytical data for soil samples is not available within approximately 100 feet of the proposed work area, additional soil samples will be collected for the analysis of PCBs prior to commencing with the intrusive work. During intrusive activities, excavated soil will be visually inspected for evidence of impacts and/or screened using a photoionization detector as applicable. The following actions shall be taken for excavated soil:

- Stockpile potentially impacted soil separately on plastic and in accordance with the SMP (see Section 5.4.2 below);
- Characterize the stockpiled soils as specified in Section 5.4.3, and dispose of stockpiled soil at an appropriately licensed facility (to be determined based on the analytical results of the samples collected from the stockpiled soil);
- Document and report the results of the soil samples to the USEPA and ACEH; and
- Replace the surface cap according to the description in Section 3.

Information relevant to each of these actions is described in more detail in the following sections.

5.4 Soil Management Strategy

Soil will be reused at the Site to the extent possible (only if soil does NOT contain contaminants of concern at concentrations greater than the cleanup criteria). Suspected contaminated soil (e.g., soil exhibiting discoloration, oily liquids, powders, or other substances, odors, or detections on field equipment) will be stockpiled and tested. This soil will only be reused if it meets the remedial goals discussed in Section 4.

5.4.1 Requirements for Imported Fill

Soil that is imported to the Site for use as fill must be sampled prior to being brought on site. A four-point composite sample should be collected for every 500 cubic yards of fill material imported to the Site and submitted for the following analyses:

- Volatile organic compounds by USEPA Method 8260B (solvent extraction EPA method 3540C)
- California Assessment Manual 17 metals by USEPA Method 6010B
- Semivolatile organic compounds by USEPA Method 8270
- PCBs by USEPA Method 8082A Soxhlet extraction, USEPA method 3540C

- Organochlorine pesticides by USEPA Method 8081
- TPH by USEPA Method 8015M

The analytical results for each of the constituents should be less than the cleanup goals provided in Section 4 of the SMP or the final Environmental Screening Levels for shallow soil (less than 1 meter below ground surface) for commercial and industrial properties where the groundwater is not a potential source of drinking water (Table B-2, RWQCB 2013), with the exception of Arsenic. Arsenic concentrations should be less than the site-specific background concentration of 7 mg/kg (see discussion presented in Appendix B of the CAP).

5.4.2 Stockpile Management

Potentially impacted soil generated from construction activities will be stockpiled on site. The stockpiles will likely be located at the northern portions of the Site but will depend on the location of the work. The stockpiles will be placed on, and covered with, polyethylene sheeting (tarps) to provide separation and prevent off-site soil migration due to wind and water erosion. In addition, a berm made of hay bales or another accepted material will be placed around each stockpile to capture any potential runoff from the stockpile. No stockpiled soils will be removed from the Site without Aspire's written permission.

Dust control measures will be used during excavation/work activities such that no visible dust migration is observed. Typically, misting with water and the use of anchored tarps can be used to control dust emissions. Mitigation procedures to prevent wind erosion of an active stockpile will include applying sufficient water or other accepted material to keep the soil slightly damp, but not so much water to create runoff from oversaturation. Stockpiles will not be piled excessively high (less than approximately 20 feet above the ground surface) to further prevent airborne transport of stockpile material.

5.4.3 Soil Characterization and Off-Site Reuse/Disposal

Soils will be adequately sampled and characterized/profiled as presented below prior to disposal to an off-site and appropriately licensed facility. Prior to characterization, the receiving facility will be identified and acceptance criteria will be provided to Aspire and ARCADIS for review and approval. No soil samples will be collected and/or analyzed without prior written approval of Aspire.

Sample collection and analyses will be required prior to transporting the soil off site for disposal or reusing the soil on site. The samples will be collected using the protocol described in the Soil Sampling Plan for imported soil for landscaping, dated June 24, 2011 (ARCADIS 2011). The proposed sampling will conform to the California Department of Toxic Substances Control (DTSC) Information Advisory – Clean Import Fill Material as follows:

- Up to 1,000 cubic yards – one sample per 250 cubic yards
- 1,000 to 5,000 cubic yards – four samples for the first 1,000 cubic yards plus one sample for each additional 500 cubic yards
- Greater than 5,000 cubic yards – 12 samples for the first 5,000 cubic yards plus one sample for each additional 1,000 cubic yards

Soils for removal and off-haul can be profiled either in-place or from the stockpile. Subsequent to permission by Aspire, all soils removed from the Site for disposal will be disposed of at a disposal facility approved by Aspire and that meets the regulatory and permitting requirements to accept the waste. All soil transportation and disposal documentation must be forwarded to Aspire upon completion of the disposal activities. All documentation regarding soil removal and disposal must be submitted to USEPA within 14 days after disposal.

6. References

ARCADIS. 2009a. Revised Corrective Action Plan, Proposed Aspire High School Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case No. RO0000411) 1009 66th Avenue, Oakland, Alameda County, California. July 17.

ARCADIS. 2009b. Toxic Substance Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California. October 23.

ARCADIS. 2009c. Conditional Approval of the Toxic Substance Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California. November 18.

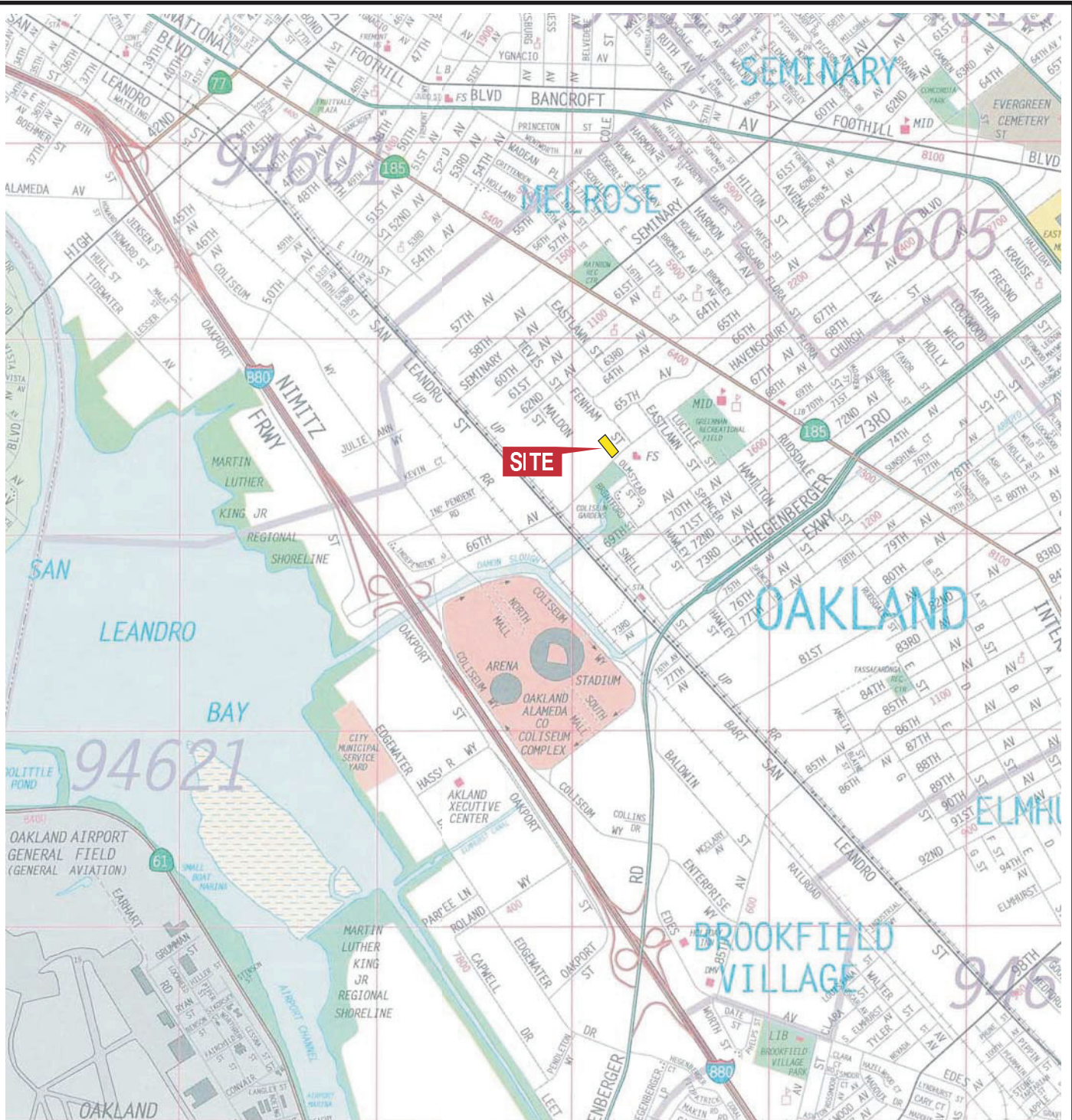
ARCADIS. 2010. Toxic Substance Control Act Risk-Based Cleanup Notification and Certification 40 CFR 761.61(c), Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California. January 14.

ARCADIS. 2011. Soil Sampling Plan for Soil to be Imported for Use in the Proposed Landscaped Areas at the Former Pacific Electric Motors Facility, 1009 66th Avenue, in Oakland, California. June 24.

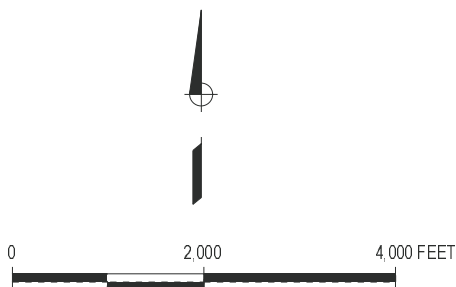
Department of Toxic Substances Control (DTSC). 2001. Information Advisory - Clean Import Fill Material http://www.dtsc.ca.gov/Schools/upload/SMP_FS_Cleanfill-Schools.pdf. October.

Regional Water Quality Control Board, San Francisco Bay Region (RWQCB). 2013. Revised Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. Revised. February.

United States Environmental Protection Agency (USEPA). 2009. Polychlorinated Biphenyls – USEPA Conditional Approval Under 40 C.F.R. § 761.61(a), Toxic Substance Control Act - "Toxic Substance Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California." November 13.



MAP SOURCE: Copyright 1995, Thomas Bros. Map ALAMEDA COUNTY 2002 Edition



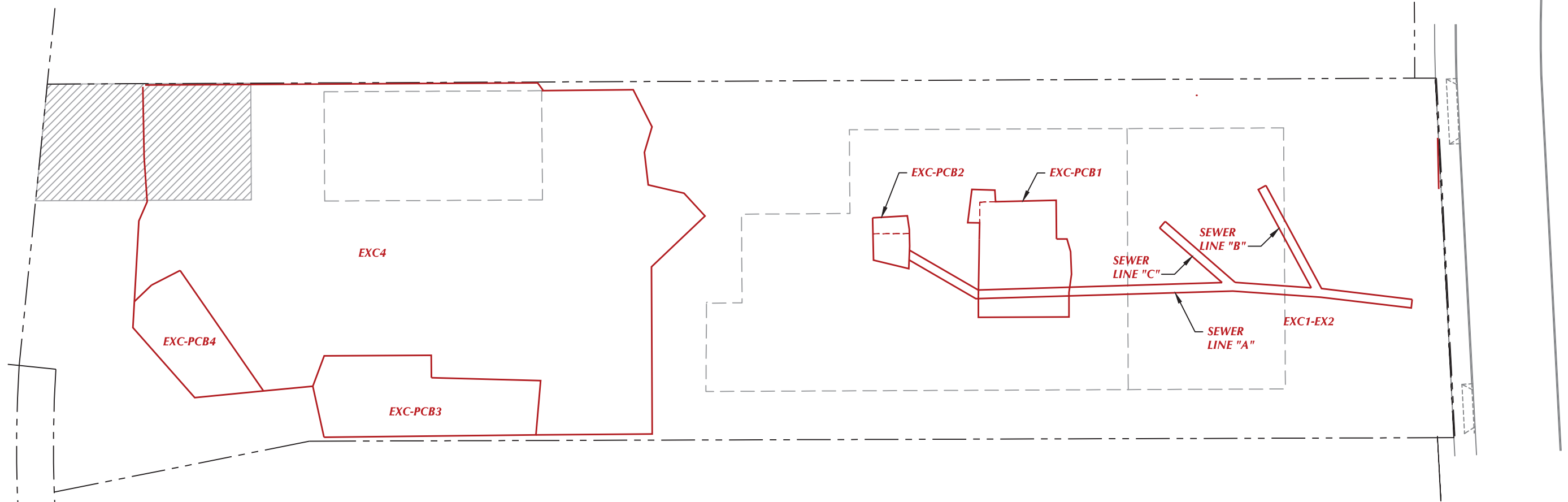
1009 66TH AVENUE, OAKLAND, CALIFORNIA

SITE VICINITY MAP



FIGURE
1

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EXPLANATION:

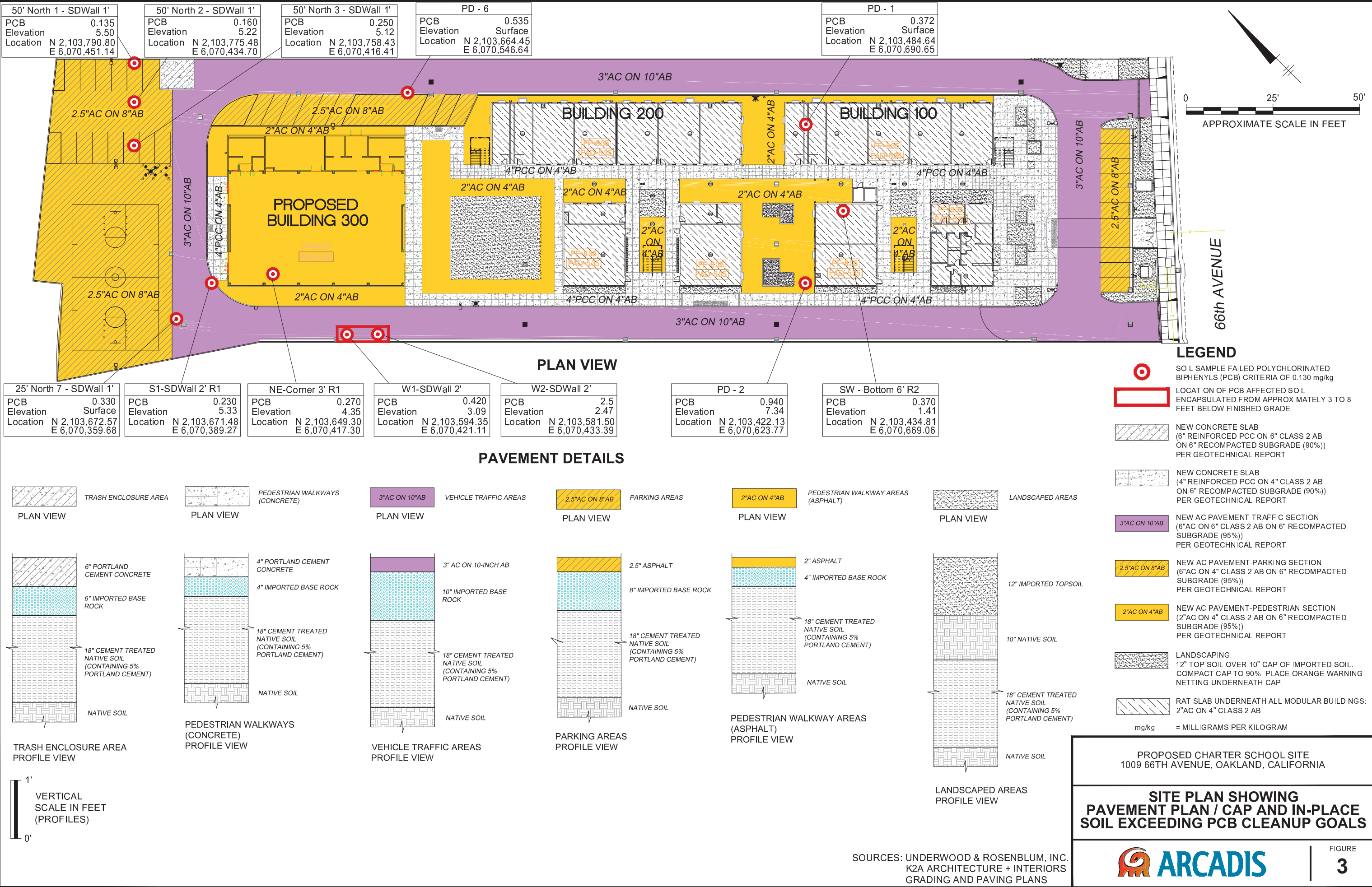
- Property Line
- Former Warehouse Building
- Area of Excavation of PCB-Affected Soil
- Reported Area of Excavation of PCB-Affected Soil in 1992

PROPOSED CHARTER SCHOOL SITE
1009 66TH AVENUE, OAKLAND, CALIFORNIA

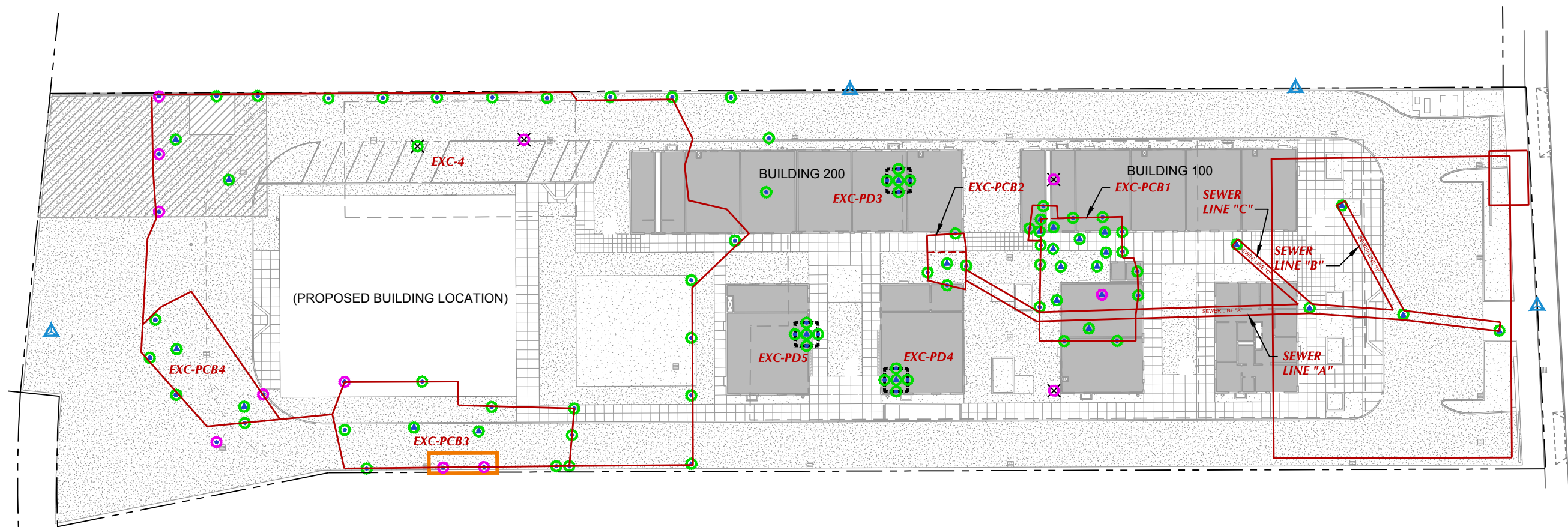
SITE PLAN



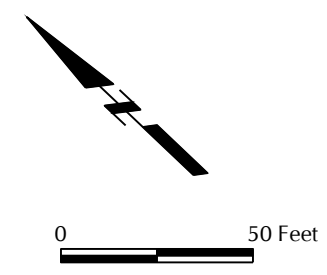
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- EXPLANATION:
- Property Line
 - Former Warehouse Building
 - Area of Excavation
 - Reported Area of Excavation of PCB-Affected Soil in 1992
 - Air Monitoring Station
 - Sidewall Confirmation Sample Location and ID
 - Bottom Confirmation Sample Location and ID
 - Post Demolition Surface Soil Sample
 - Passed Polychlorinated Biphenyls (PCB) Criteria of 0.130 mg/kg
 - Failed PCB Criteria of 0.130 mg/kg
 - Location of PCB Affected Soil Encapsulated from Approximately 3 to 8 Feet Below Finished Grade
 - EXC-PD5 Post Demolition Excavation Areas. Excavated Soil Encapsulated in EXC PCB3.



PROPOSED CHARTER SCHOOL SITE
1009 66TH AVENUE, OAKLAND, CALIFORNIA

**SITE PLAN SHOWING EXCAVATION
AREAS AND CONFIRMATION SAMPLE
LOCATIONS**


 **ARCADIS**

FIGURE
4